Strat/trop model issues

1. Big picture: what do we envision doing with this model?

    a. Address STE issues
    b. Impact of stratosphere on UT chemistry/oxidizing capacity of the troposphere
    c. Aura data analysis (e.g., MLS CO, HNO3, O3 in UT/LS).

Need new met fields to do this - Mark Olson's work suggests fvGCM good -> get fvgcm met fields.

2. New met fields:

Goal: construct 5-year data set from fvGCM 50-year run with time-varying SSTs

How:

- The Steves (Steenrod/Pawson) and Mark Olson will work together to identify a suitable 5 year period and create GMI netcdf met files
- Initial year can be used for model testing/integration, multiple years for later studies addressing variability.
- This is a high-priority item!

Implementation methodology:

1. get code running at GSFC (Strahan/core)
2. fix troposphere? (things that Jennifer found that have been fixed in trop model)
3. Simple fixes/adjustments to mechanism to reduce complexity (Rich/David Lary/Mohan to suggest; considine to deliver mechanism description)
4. Initial 1 year run
5. Writeup????

Strat/trop solvers/mechanisms

Goal - configure model to run both Peter's mechanism/solver, LaRC mechanism/solver as an initial step (Hamid/Considine)

H2O:

- implementing a full-up H2O implementation valid for strat/trop a la MATCH too costly compared to STE diagnostic benefit
- will try to transport H2O in strat (represent tape recorder, kaibosh PSC "dehyd" field)
- will rely on HCl/O3 as diagnostic of strat air in troposphere

FastJ-2:

- What about high sza modifications?
- Will implement fastj-2, either modified or as is, this summer (Hamid).

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